

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

<b>JOANNE COUSINS</b> , on behalf of the	:	
<b>ESTATE OF MATTHEW COUSINS</b> and on	:	<b>CIVIL ACTION</b>
behalf of his <b>DOHSA beneficiaries</b>	:	<b>NO.</b>
21 Huntingdon Drive	:	
Cole Harbour, NS B2V1V9,	:	
	:	
<b>TANYA COWBROUGH</b> , on behalf of the	:	
<b>ESTATE OF ABBIGAIL COWBROUGH</b>	:	<b>JURY TRIAL DEMANDED</b>
and on behalf of her <b>DOHSA beneficiaries</b>	:	
3775 Kencrest Avenue, Apt. 5	:	
Halifax, NS B3K3L4,	:	
	:	
<b>KYLE HAGEN</b> , on behalf of the <b>ESTATE</b>	:	
<b>OF KEVIN HAGEN</b> and on behalf of his	:	
<b>DOHSA beneficiaries</b>	:	
1505 Winchester Road	:	
Victoria, BC V8N2B6,	:	
	:	
<b>AMANDA MacDONALD</b> , on behalf of the	:	
<b>ESTATE OF BRENDEN IAN</b>	:	
<b>MacDONALD</b> , and on behalf of his <b>DOHSA</b>	:	
<b>beneficiaries</b>	:	
59 Vicky Crescent	:	
Eastern Passage, NS B3G1TS,	:	
	:	
<b>KATHRYN BOWEN</b> , on behalf of the	:	
<b>ESTATE OF MAXIME MIRON-MORIN</b> ,	:	
and on behalf of his <b>DOHSA beneficiaries</b>	:	
428-5501 Cunard Street	:	
Halifax, NS B3K0J4	:	
	:	
<b>MICHAEL CUSTANCE</b> , on behalf of the	:	
<b>ESTATE OF MATTHEW PYKE</b> , and on	:	
behalf of his <b>DOHSA beneficiaries</b>	:	
46 Old Greenfield Branch Road	:	
Valley, NS B2N2N0	:	
	:	
<b>Plaintiffs,</b>	:	
	:	

v. :

**SIKORSKY AIRCRAFT CORPORATION :**

**d/b/a SIKORSKY, A LOCKHEED :**

**MARTIN COMPANY, c/o Corporation :**

Service Company, 2595 Interstate Drive, Suite :

103, Harrisburg, PA 17110, :

**HELICOPTER SUPPORT, INC. d/b/a :**

**HELICOPTER SUPPORT, INC., A :**

**LOCKHEED MARTIN COMPANY :**

c/o Corporation Service Company, 2595 :

Interstate Drive, Suite 103, Harrisburg, PA :

17110, :

**SIKORSKY INTERNATIONAL :**

**OPERATIONS, INC. d/b/a SIKORSKY :**

**INTERNATIONAL OPERATIONS, A :**

**LOCKHEED MARTIN COMPANY :**

6900 Main Street :

Stratford, CT 06615 :

**Defendants**

## **COMPLAINT**

### **INTRODUCTION**

1. On April 29, 2020, the Plaintiffs’ six decedents – all members of the Canadian Armed Forces (“CAF”) – suffered fatal injuries when a Sikorsky CH-148 Cyclone maritime helicopter crashed into the sea off the coast of Greece.<sup>1</sup>

2. Just before the crash, the Sikorsky CH-148’s fly-by-wire Electronic Flight Control System (“EFCS”) overrode the pilots’ commands and plunged the helicopter at high speed into the sea.

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<sup>1</sup> In March 2021, the Plaintiffs and the Sikorsky Defendants entered into a Tolling Agreement which extended the Statutes of Limitations for Plaintiffs’ causes of action.

3. A fly-by-wire EFCS is a computer-regulated aircraft flight control system that removes the direct mechanical linkages between the pilots' controls and the aircraft's actuators. EFCS relies upon computers to interpret pilot inputs and then, by applying the computers' control laws, send electronic signals to the actuators which move the flight surfaces and direct the helicopter's flight. On the CH-148, pilots can elect to have the EFCS maintain certain flight parameters, such as airspeed or altitude, through the helicopter's Flight Director, which is the CH-148's autopilot function. Sikorsky had represented to pilots that they could resume manual control of the CH-148 and override the Flight Director without disconnecting it.

4. In the final moments of the accident flight, the Flight Director was engaged to maintain airspeed. As the pilots completed a multi-axis, low altitude maneuver using manual pedal and cyclic inputs, the CH-148's EFCS took control away from the pilots and pitched the helicopter's nose down, accelerating towards the water. The EFCS completely overrode the pilots' attempts to stop the descent.

5. As Sikorsky's EFCS caused the helicopter to dive towards the sea, the pilots and the passengers all knew that they were going to die. Each person experienced unimaginable terror and fright in the moments before the helicopter impacted the water, causing everyone aboard to suffer fatal injuries.

6. Plaintiffs seek recovery for their losses and damages pursuant to the Death on the High Seas Act, codified at 46 U.S.C. §30301, *et seq.* ("DOHSA") and the Pennsylvania Survival Act, 42 P.S. §8302.

7. The Sikorsky Defendants designed, manufactured, assembled, marketed, and sold this CH-148 helicopter (Aircraft Registration Number: CH148822; Aircraft Type: CH148 Cyclone; Call Sign: Stalker 22 (hereafter: “Incident CH-148 Helicopter”)).

8. Although the Defendants performed work on their CH-148s in West Palm Beach, FL, Stratford, CT, Montrose, CO, Duluth, MN, Patuxent River, MD and Troy, AL, the Sikorsky Defendants designated only one location to be – in their own words – “*The Home of the CH-148*,” their facility in Coatesville, PA.

9. Pennsylvania, as Sikorsky’s chosen “*Home of the CH-148*,” has an interest in “deter[ing] manufacturers from placing defective products into the stream of commerce and avoiding responsibility for damages caused by the defect.” *Lewis v. Lycoming*, 917 F.Supp.2d 366, 376 (E.D. Pa. 2013)

10. At the Sikorsky Defendants’ Coatesville, PA facility– just 26 miles west of this Courthouse – Sikorsky, among other work, assembled, upgraded, and conducted the final flight acceptance tests on the Incident CH-148 Helicopter.<sup>2</sup>



*Figure 1 Incident CH-148 at Defendants' Coatesville, PA Heliplex*

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<sup>2</sup> Following this fatal accident and after being notified that the undersigned counsel represent the Plaintiffs, the Sikorsky Defendants closed their Coatesville, PA facility.

11. In the 1990s, the Canadian Department of National Defence (“DND”) decided to replace their aging fleet of Sikorsky Sea King CH-124 maritime helicopters. The DND’s requests for proposal did not specify or even mention an EFCS. At that time, an EFCS had never been used on a military helicopter anywhere in the world.

12. The Sikorsky Defendants advocated that the new fleet of helicopters utilize an EFCS. This would provide the Defendants an opportunity to recoup some of the investment they had already made in developing an EFCS for a civilian helicopter, their S-92, which would become the prototype for the CH-148. The FAA never certified the EFCS for the S-92 and, because Sikorsky could not find a single buyer for an S-92 with an EFCS, it never went into production.

13. The DND acceded to the Sikorsky Defendants’ proposal that the CH-148 have an EFCS. The Sikorsky Defendants, and not the DND, then wrote the Maritime Helicopter System Specifications to outline the EFCS capabilities of the CH-148.

14. The Sikorsky Defendants’ EFCS has been incorporated into only one helicopter: their CH-148. The total flight time for all CH-148s is still very limited. Although Sikorsky was supposed to deliver the first CH-148 in November 2008, Sikorsky did not deliver sufficient CH-148s for operational capacity until 2018, a decade later and less than two years before this fatal accident.

15. Immediately prior to the crash, the pilot of the Incident CH-148 Helicopter was completing a multi-axis, low altitude maneuver (which required significant pedal and cyclic inputs), similar to a “Return-to-Target” maneuver that is used by military helicopters in combat or rescue situations.

16. After the accident, Sikorsky received and analyzed the Incident CH-148's flight data. It confirmed that its EFCS would take pitch control of the helicopter away from the pilots when they made significant pedal and cyclic inputs while the Flight Director was maintaining airspeed. The Defendants later termed this hidden and deadly defect: "Command Model Attitude Bias."

17. Sikorsky's testing of its EFCS under the Incident Flight's conditions repeatedly and consistently resulted in a fatal crash. At the time of the Incident, Sikorsky's EFCS was performing exactly as Sikorsky had designed it.

18. Since the accident, the Sikorsky Defendants have argued that, during their design and testing of the CH-148 EFCS, they never could have foreseen that a military helicopter would ever perform multi-axis, low altitude maneuvers. Their defense apparently is that they could not anticipate that a military helicopter might actually perform well-known military maneuvers.

19. The Sikorsky Defendants directly violated industry standards by ignoring the requirement that their CH-148s' equipment and systems be "designed and installed to ensure that they perform their intended functions under any foreseeable operating condition." *See* 14 C.F.R. 29.1309.<sup>3</sup>

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<sup>3</sup> There are other signs of Sikorsky's poor design review process for the CH-148. For example, one of the primary functions of the CH-148 was to conduct electronic surveillance after taking off from the deck of a frigate in stormy seas. Sikorsky did not detect in its design review process that:

- It mounted the sonar on the underside of the helicopter so that the helicopter could not land on a naval vessel in rough seas; this design flaw required the recall of all finished CH-148 helicopters and the re-design of those in production; and

20. Both the law and the facts preclude Sikorsky from blaming its customer – the DND – for this deadly design flaw. Legally, a “product manufacturer in Pennsylvania has a non-delegable duty to provide a safe product.” *Forrest v. Beloit Corp.*, 424 F.3d 344, 352 (3d Cir. 2005). And, factually, Sikorsky knew from its own experience that Canadian Armed Force’s (“CAF’s”) pilots performed multi-axis, low altitude maneuvers. Sikorsky knew also that it could not presume that pilots would always disengage a flight director before using manual controls. Although this was Sikorsky’s first EFCS, it was aware that other aircraft manufacturers’ EFCSs had resulted in fatal crashes when pilots used manual controls while the flight director was engaged.

21. The flight conditions at the time of the Incident were entirely foreseeable to Sikorsky, independent of any information it was provided by the DND. If Sikorsky had adequately tested its EFCS during the design phase, then it would have discovered its Command Model Attitude Bias before killing six people.

22. The Sikorsky Defendants knew that CAF pilots for decades flew the Sikorsky CH-124 helicopters in multi-axis, low altitude maneuvers, including “Return-to-Target” (“RTT”) maneuvers.<sup>4</sup>

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- It designed the fuselage tail so that it had insufficient strength to support the electronic equipment it mounted on the tail, thereby causing the frames to crack and the entire fleet of CH-148s to be grounded.

<sup>4</sup> “Return-to-Target” maneuvers were not listed or described in the CH-124 Standard Maneuver Guide. The Sikorsky Defendants knew that in defining the anticipated flight maneuvers for the CH-148’s EFCS, they could not and should not be limited to what was listed in the CAF’s Standard Maneuver Guide or Manual.

23. Before it even began to design and test the CH-148 EFCS, Sikorsky knew that the CAF pilots who did RTT maneuvers while flying the CH-124 would be transitioning to become the pilots of the CH-148s. Sikorsky should have anticipated that the CAF pilots would continue to fly RTT maneuvers in the CH-148s.

24. The Sikorsky Defendants knew – but either forgot or ignored – the potential consequences of: (a) not completing a rigorous review process when incorporating a new design into a helicopter; and (b) not providing warnings to the pilots of the potentially fatal consequences of Sikorsky’s design decisions. For its S-92 helicopters – the prototype for the CH-148 – the Sikorsky Defendants recklessly failed to evaluate a design change for a critical component, and they failed to warn the pilots of the consequences of its design change. In 2009, Sikorsky’s failures resulted in a crash that took the lives of 17 of the 18 people onboard and left the sole survivor with lifetime injuries.

25. When designing the CH-148 ECFS, the Sikorsky Defendants failed to conduct a rigorous design review process and failed to warn pilots that their EFCS could override the pilots’ control of the aircraft. The Sikorsky Defendants ignored the lessons they should have learned from the deaths of the innocent people on the S-92.

26. At the time of the crash, the fatal flaw in Sikorsky’s EFCS was unknown to the DND, the CAF, and the pilots of the Incident CH-148 Helicopter. The Sikorsky Defendants did not include any warnings about the potential for Command Model Attitude Bias in the CH-148 helicopter’s flight manual, design documents, or training materials. In fact, Sikorsky’s manuals instructed pilots that they could manually override the Flight Director if required.



27. In violation of industry practice, the Sikorsky Defendants designed their CH-148 so that the Flight Director did not automatically disengage if the pilots' control inputs went beyond what Sikorsky had tested or anticipated for when the Flight Director was engaged.

28. The Sikorsky Defendants did not caution in their manual or in their training that pilot inputs should not go beyond what Sikorsky had tested or anticipated for when the Flight Director was engaged.

29. The Sikorsky Defendants designed their CH-148 so there was no visual or aural warning to the pilots if a Command Model Attitude Bias was developing.

30. In violation of well recognized industry practice and standards, the Sikorsky Defendants designed the CH-148 control panel so that the visual indicator for the status of the EFCS was located outside the effective range of the pilots' field of vision.<sup>5</sup>

31. In violation of industry standards and practice, the Sikorsky Defendants did not perform adequate safety analysis or testing of their CH-148's EFCS. Reflecting a corporate indifference to safety that placed profits first, the Sikorsky Defendants – in the face of missed deadlines and financial penalties – cut corners to rush the CH-148 into service, which resulted in the terrifying and tragic deaths of Matthew Cousins, Abbigail Cowbrough, Kevin Hagen, Brenden MacDonald, Maxime Miron-Morin and Matthew Pyke.

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<sup>5</sup> The U.S. National Transportation Safety Board ("NTSB") had previously criticized Sikorsky's poor human-machine interface in a 2004 crash of an S-76. <https://www.nts.gov/investigations/AccidentReports/Reports/AAR0602.pdf>. And, prior to the accident, Sikorsky acknowledged, and even recommended to the FAA, that the pilot be notified in their primary field of vision of any change that can "alter the pilot's primary control strategy." F.R., Vol. 83, No. 75 p.17077. See also MIL-STD-1272H, Department of Defense Design Criteria Standard, Human Engineering, 9/15/20.

## **THE PARTIES**

32. At the time of their injuries and deaths, each one of the Plaintiffs' decedents was serving in the Canadian Armed Forces ("CAF"). Under Canadian as well as under U.S. law, no Canadian governmental body – including the DND, the CAF, the Royal Canadian Air Force ("RCAF") or any of their staff or employees – can be made a defendant in a legal proceeding seeking damages for injuries suffered by service members in the line of duty, irrespective of whether the action is filed in Canada or in the United States.

### **i. The Plaintiffs**

33. **Plaintiff Joanne Cousins** is the widow of Plaintiff's decedent Matthew Cousins; Matthew was born in August 1976 and was 44 years old at the time of his death. Joanne and Matthew were married on May 11, 2002, and have two children: T. C. (born in 2003) and A.C. (born in 2005). Matthew's wife Joanne and their children qualify as Matthew's dependents within the requirements of DOHSA. Joanne Cousins, who resides at 21 Huntingdon Drive Cole Harbour, Nova Scotia B2V 1V9, was appointed the Executrix of the Estate of Matthew Cousins.

34. **Plaintiff Tanya Cowbrough** is the mother of Plaintiff's decedent **Abbigail Cowbrough**; Abbigail was born in July 1996 and was 23 years old at the time of her death. In addition to her mother, Abbigail was survived by her three brothers, one of whom August Pittarelli (born in 2000) was dependent on Abbigail. August Pittarelli and Tanya Cowbrough qualify as dependents of Abbigail within the requirements of DOHSA. Tanya Cowbrough, who resides at 3775 Kencrest Avenue, Apt. 5, Halifax, Nova Scotia B3K 3L4, was appointed the Executrix of the Estate of Abbigail Cowbrough.

35. **Plaintiff Kyle Hagen** is the brother of Plaintiff's decedent **Kevin Hagen**; Kevin was born in July 1989 and was 30 years old at the time of his death; Kevin was survived by his parents Lynn Steiner and Steffen Hagen. Kevin's parents qualify as Kevin's dependents within the requirements of DOHSA. Kevin's brother Kyle Hagen, who resides at 1505 Winchester Road, Victoria, British Columbia V8N 2B6, was appointed the Executor of the Estate of Kevin Hagen.

36. **Plaintiff Amanda MacDonald** is the widow of Plaintiff's decedent **Brenden Ian MacDonald**; Brenden was born in March 1985 and was 35 years old at the time of his death. Amanda and Brenden were married on April 18, 2012 and have three children: B.M. (born in 2014), C.M. (born in 2017), and T.M. (born in 2018). Brenden was additionally survived by his parents Peter and Lynn MacDonald. Brenden's wife Amanda, the couple's three children, and Brenden's parents qualify as dependents of Brenden MacDonald within the requirements of DOHSA. Amanda, who resides at 59 Vicky Crescent, Eastern Passage, Nova Scotia B3G 1TS, was appointed the Executrix of the Estate of Brenden Ian MacDonald.

37. **Plaintiff Kathryn Bowen** is the widow of Plaintiff's decedent **Maxime Miron-Morin**; Maxime was born in February 1991 and was 29 years old at the time of his death. Kathryn and Maxime were married on December 30, 2014 and have no children. Maxime was additionally survived by his parents Marie-Claude Miron and Jean Morin. Kathryn and Maxime's parents qualify as Maxime's dependents within the requirements of DOHSA. Maxime Miron-Morin died intestate leaving his wife as his intestate heir.

Kathryn, who resides at 428-5501 Cunard Street Halifax, Nova Scotia B3K 0J4, was appointed the Administratrix of the Estate of Maxime Miron-Morin.

38. **Plaintiff Michael Custance** is the brother of Plaintiff's decedent Matthew Pyke; Matthew was born in March 1986 and was 34 years old at the time of his death. Matthew Pyke was survived by his parents David Pyke and Kelly Custance. David Pyke lived in the home owned by his son Michael at the time of Michael's death. David Pyke and Kelly Custance qualify as Matthew's dependents within the requirements of DOHSA. Michael Custance, who resides at 46 Old Greenfield Branch Road, Valley, Nova Scotia B2N2N0, was appointed the Executor of the Estate of Matthew Pyke.

ii. **The Defendants**

39. **Defendant Sikorsky Aircraft Corporation d/b/a Sikorsky, a Lockheed Martin Company** ("Sikorsky") is a Delaware corporation with its principal place of business located at 6900 Main Street, Stratford, CT 06615. It is registered to do business in the Commonwealth of Pennsylvania and has designated Corporation Service Company, 2595 Interstate Drive, Suite 103, Harrisburg, PA 17110 as its agent for service of process.

40. Defendant Sikorsky, both directly and through its wholly owned subsidiaries, designs, manufactures, assembles, repairs, services, distributes, markets, and sells helicopters and is a "supplier" and commercial "seller" of helicopters within the requirements for strict liability and product liability under Section 402A of the Restatement (Second) of Torts.

41. **Defendant Helicopter Support, Inc. d/b/a Helicopter Support, Inc., a Lockheed Martin Company** ("HSI") is now a Connecticut corporation with its principal

place of business located at 124 Quarry Road, Trumbull, CT 06611. Defendant HSI is registered to do business in the Commonwealth of Pennsylvania and has designated Corporation Service Company, 2595 Interstate Drive, Suite 103, Harrisburg, PA 17110 as its agent for service of process.

42. Defendant HSI is a wholly owned subsidiary of Sikorsky.

43. Defendant HSI is the successor corporation to Keystone Helicopter Corporation and Sikorsky Global Helicopters, Inc.

44. Keystone Helicopter Corporation was incorporated in Pennsylvania on July 31, 1961. On October 3, 2011, Keystone Helicopter Corporation changed its name, via articles of amendment, to Sikorsky Global Helicopters, Inc. On January 1, 2015, Sikorsky Global Helicopters, Inc. merged with Helicopter Support, Inc.

45. Defendant HSI designs, manufactures, assembles, repairs, services, distributes, markets, and sells helicopters and is a “supplier” and commercial “seller” of helicopters within the requirements for strict liability and product liability under Section 402A of the Restatement (Second) of Torts.

46. At all relevant times, Defendant HSI (and its predecessors Keystone Helicopter Corporation and Sikorsky Global Helicopters) maintained a principal place of business at 110 East Stewart Huston Drive, Coatesville, PA 19320.

47. The Pennsylvania facility was the site of final production for many CH-148 helicopters, including the Incident CH-148 which, among other work, was assembled in Coatesville, PA and returned there for “block upgrades.”

48. The Incident Helicopter was a so-called “Block 2” iteration of the CH-148 – an operational upgrade from a group of eight “Block 1” helicopters that had been first delivered by Sikorsky to the DND in 2015. The Block 2 upgrades for the Incident Helicopter – which included upgrades to the helicopter’s software and structural systems – took place at the Sikorsky facility in Coatesville, PA.

49. When the Incident Helicopter was to be delivered to the DND, RCAF pilots flew to Coatesville, PA to confirm that the helicopter was mission ready (as was the practice for all Block upgrades at Coatesville).

50. Plaintiff Amanda MacDonald’s decedent Brenden MacDonald traveled on several occasions to Sikorsky’s Coatesville, PA facility for work related to the CH-148.

51. **Defendant Sikorsky International Operations, Inc. d/b/a Sikorsky International Operations, a Lockheed Martin Company** (“Sikorsky International Operations”) is a Delaware Corporation with its principal place of business located at 6900 Main Street, Stratford, CT 06615.

52. Formed in 1986, Defendant Sikorsky International Operations is a wholly owned subsidiary of Defendant Sikorsky, which directs and controls its operation.

53. Defendant Sikorsky sold its CH-148s to DND through its subsidiary Sikorsky International Operations.

54. The Defendants are collectively referred to as the “Sikorsky Defendants” or “Sikorsky.”

55. Defendant Sikorsky has a subsidiary, Sikorsky Support Services, Inc. which is composed of three divisions: Aircraft Service Division (providing crash damage repairs

to Sikorsky helicopters); Maintenance Service Division (providing contract maintenance of Sikorsky helicopters); and Field Services Operations (supporting maintenance and retrofitting of Sikorsky helicopters). Sikorsky Support Services monitored and analyzed the operator health and usage monitoring system data, and the maintenance repair records for all CH-148 helicopters, including the Incident CH-148 Helicopter. Sikorsky Support Services, Inc. is registered to do business in the Commonwealth of Pennsylvania.

56. The Sikorsky Defendants designed, manufactured, assembled, advertised, marketed, and sold the Incident CH-148 Helicopter.

57. After the sale of the Incident CH-148 Helicopter, the Sikorsky Defendants monitored the performance, maintenance and field experience of the CH-148 fleet (including the Incident CH-148 Helicopter) and undertook the responsibility to warn the DND of: (a) any newly discovered hazards, limitations or defects in the helicopters; (b) any need to recall the products or to remove and replace any unsafe or defective component parts; (c) any need to add or modify components to the craft in order to mitigate the safety effect of design defects; and (d) any changes needed for, or made to the Flight Manual.

### **JURISDICTION AND VENUE**

58. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§1331, 1332 and 1333.

59. Jurisdiction under 28 U.S.C. §1331 is premised on Plaintiffs' assertion of federal claims under DOHSA, codified at 46 U.S.C. §30301, *et seq.* The accident occurred on the "high seas" within the meaning of DOHSA - 77 nautical miles west of Greece (38°29'18.0" N 18°38'22.8" E). *See* 46 U.S.C. §30302.

60. Jurisdiction under 28 U.S.C. §1332 is premised on the diverse citizenship of the Canadian plaintiffs and American defendants, coupled with an amount in controversy greater than \$75,000.

61. Jurisdiction under 28 U.S.C. §1333 is premised on Plaintiffs' claims under the maritime laws of the United States.

62. The Court has specific personal jurisdiction over the Defendants given that the Incident CH-148 Helicopter was, at least in part, designed, manufactured, assembled, and tested at Defendants' facility in Coatesville, PA.

63. Defendants Sikorsky and HSI were at all times relevant to this suit registered to do business in the Commonwealth of Pennsylvania and therefore have voluntarily consented to general personal jurisdiction in the Commonwealth of Pennsylvania and this Federal court. *See* 15 Pa. C.S.A. § 411(a)(An out-of-state corporation “may not do business in this Commonwealth until it registers with” the Department of State.); 42 Pa.C.S.A. §5301(a)(2)(“[Q]ualification as a foreign corporation” shall permit state courts to “exercise general personal jurisdiction” over a registered foreign corporation); *Mallory v. Norfolk S. Ry. Co.*, 2023 WL 4187749 (U.S. June 27, 2023)(holding that Pennsylvania’s consent jurisdiction statute complies with federal due process requirements under the Fourteenth Amendment).

64. Venue is properly laid in this Court pursuant to 28 U.S.C. §1391(b)(1) and (c)(2), which provide that “an entity . . . shall be deemed to reside, if a defendant, in any judicial district in which such defendant is subject to the court’s personal jurisdiction with respect to the civil action in question . . . .”



## **FACTUAL BACKGROUND**

### **i. The Design of the CH-148 Helicopter**

65. In the 1990s, the CAF began a process to replace its CH-124 Sikorsky Sea King Helicopter fleet. It requested proposals from manufacturers for a new maritime helicopter. The CAF did not require or even mention the use of a fly-by-wire electronic flight control system.

66. The CAF selected the Sikorsky Defendants to provide the replacement for the Sea King: the CH-148 Cyclone, with the first CH-148 due for delivery in 2008.

67. The Sikorsky Defendants missed the contractual completion date by seven years, delivering for service the first CH-148 in 2015.

68. Sikorsky knew that the CH-148 would be required to perform maneuvers expected of a military helicopter which include aggressive multi-axis inputs for extended periods, including during “Return-to-Target” (“RTT”) maneuvers. Sikorsky was very familiar with the CAF’s use of the Sea King, which had a long history of conducting RTTs, both from ship and shore.

69. The Sikorsky Defendants based the CH-148’s design on the design of Sikorsky’s existing civilian S-92A helicopter, which was manufactured in Coatesville, PA.

70. Before their work on the CH-148, the Sikorsky Defendants started to modify the S-92A’s initial design by replacing the mechanical flight controls with fly-by-wire controls and an EFCS.

71. As explained by Sikorsky’s engineers:

The S-92F is an S-92A modified to remove the mechanical flight controls and replace them with fly by wire (FBW) controls. Sikorsky has filed for FAA certification under Part 29 for this configuration. The S-92F is the basis for the Canadian Forces new Maritime Helicopter, the CH148 Cyclone. The S-92F FBW flight control system (FCS) controls the air vehicle's flight path without providing any direct mechanical linkages between the pilot and the control surfaces.<sup>6</sup>

72. Sikorsky planned to seek FAA certification of the modified S-92A as the S-92F but abandoned the project because it could not find any buyers for the new design. The FAA never certified the Sikorsky Defendants' S-92 EFCS, which never went into production.

73. By transferring its design work on the S-92F's EFCS to the CH-148 project, Sikorsky could recoup some of its financial investments.

**ii. Development of the Electronic Flight Control System**

74. The Sikorsky Defendants recognized the EFCS to be a safety-critical system. They knew that, if it did not operate as intended, the EFCS could cause catastrophic consequences, including the death of the CH-148s' pilots and passengers.

75. As documented by Sikorsky's engineers in 2006, Sikorsky recognized that in its ECFS design review process it needed to "stress the system to the **operational envelope extremes** expected during flight test and operational usage to verify the robustness of the control laws, reconfiguration (redundancy management) and built-in-test algorithms (fault detection and isolation)" (emphasis added).<sup>7</sup>

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<sup>6</sup> Stiles, L.; Knaust, G.; and Wittmer, K.: *The S-92 Goes Fly By Wire*. Proc. American Helicopter Society 64th Annual Forum, Montreal, Canada, April 29–May 1, 2008, p. 1.

<sup>7</sup> Bassett, J.; Boczar, B.; and Brinkmeier, N: *The H-92 Fly-By-Wire System Integration Laboratory*. Proc. American Helicopter Society 62nd Annual Forum, Phoenix, AZ, May 9-11, 2006, p. 3

76. Sikorsky indicated that it intended to develop the EFCS for the S-92F and CH-148 in accordance with industry standards. These standards included requirements for aircraft capabilities and safety-driven development processes. Sikorsky did not comply with industry standards in the design and development of the CH-148.

77. Sikorsky intended to, and represented that it did, comply with the requirements of ADS-33E-PRF, Handling Qualities Requirements for Military Aircraft. This standard was issued by the United States Army Aviation and Missile Command. It specifies certain minimum maneuvers that a helicopter must be able to perform safely.

78. Sikorsky claimed that the civilian S-92F, and therefore the military CH-148, could safely perform certain maneuvers identified in ADS-33E-PRF:

- a. without degrading handling during aggressive maneuvering; and,
- b. without causing undesirable coupling between axes during aggressive maneuvering.

79. These specified maneuvers involve aggressive multi-axis pilot inputs for durations of 15 seconds or more.

80. Because Sikorsky designed its CH-148 helicopter to comply with ADS-33E-PRF, it knew that its EFCS should be tested with the Flight Director engaged and disengaged for maneuvers that involved aggressive multi-axis manual pilot inputs for durations of 15 seconds or more.

81. If Sikorsky had developed and tested the S-92F EFCS and the resultant CH-148 with reasonable care, they would have discovered that aggressive multi-axis pilot inputs, as well as other maneuvers, could cause the Command Model Attitude Bias that

resulted in the accident. A final opportunity for Sikorsky to detect and correct this problem was during acceptance testing performed in Coatesville, PA.

82. It is essential that an EFCS, like any safety critical system, be designed and tested for all foreseeable flight maneuvers.

83. Before it designed the CH-148 EFCS, Sikorsky knew that the CH-148 was replacing the CH-124, that RTT maneuvers were not listed in the CH-124 Standard Maneuver Guide, and that CAF pilots had a long history of conducting RTTs while operating the CH-124.

84. Before it even began to design and test the CH-148 EFCS, Sikorsky had direct knowledge that it could not rely solely on a standard maneuver guide or manual to define the full envelope of foreseeable flight maneuvers.

85. Before it even began to design and test the CH-148 EFCS, Sikorsky knew that the CAF pilots who did RTT maneuvers while flying the CH-124 would be transitioning to piloting the CH-148s. Sikorsky should have anticipated that the CAF pilots would continue to fly RTT maneuvers in the CH-148s.

86. Even though RTT maneuvers were not formally listed in the CH-148 Standard Maneuver Manual, RTT and similar multi-axis maneuvers with significant pedal and cyclic inputs are common for military helicopters.

87. After supplying the CH-148s to the DND, Sikorsky monitored the flight data which confirmed – before this fatal accident – that the CAF pilots were continuing to fly RTT maneuvers with the CH-148 just as they had with the CH-124. Sikorsky disregarded

this confirming data and did not review the adequacy of its design review process or the safety of its EFCS.

88. A reasonable and responsible designer of EFCS cannot and should not assume that the automated features of the EFCS will always be disengaged before all complex flight maneuvers. This is especially true for a military helicopter which may have to take immediate evasive action if targeted or fired upon while flying with automation.

89. A reasonable and responsible designer of EFCS would incorporate design laws which automatically disengage the Flight Director before a dangerous situation such as Command Model Attitude Bias could develop.

90. Sikorsky intended to, and represented that it did, comply with the requirements of DO-178B, Software Considerations in Airborne Systems and Equipment Certification. The Radio Technical Commission for Aeronautics issued this standard, which specifies standards for the development and testing of software.

91. DO-178B requires comprehensive verification software testing, including extensive robustness testing. This testing is intended to determine how the software performs when extreme or abnormal inputs are made, including inputs that designers do not intend to be made during normal operation of a helicopter.

92. Sikorsky violated the requirements of DO-178B.

93. If Sikorsky had conducted reasonable robustness testing, as required by DO-178B and accepted software development practices, they would have discovered the Command Model Attitude Bias that resulted in the accident.

94. The Sikorsky Defendants' EFCS testing process also violated the requirements of industry standard SAE ARP4761, "*Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment*," which requires the design of safety critical systems to account for single-point failures and unexpected pilot actions.

95. After this crash, the Sikorsky Defendants received the accident flight data, which they tested within their EFCS architecture. Sikorsky reported that it confirmed that its EFCS, under the flight's conditions, would consistently cause Command Model Attitude Bias and result in a fatal crash.

96. Proper and appropriate testing within Sikorsky's design review process would have revealed the Command Model Attitude Bias before it killed six people.

**iii. Electronic Flight Control System Automation**

97. The EFCS included certain features intended to reduce pilot workload. One of these features – the Flight Director – permits the pilots to select different levels of automation to assist with control of the helicopter.

98. If a pilot wants to maintain a certain airspeed, they can "couple" the Flight Director to the indicated airspeed ("IAS"). If they want to maintain a certain altitude, they can couple the Flight Director to a radar altitude hold.

99. When coupled, the Flight Director will make inputs to the EFCS to maintain the parameters selected by the pilots. If the pilots want to stop using this automation, they may choose to decouple the selected parameters.

100. Sikorsky communicated to CH-148 pilots, through its manuals, training, demonstration, acceptance flights, and informal discussions with pilots, that it was acceptable and expected for pilots to override the Flight Director without decoupling it. Sikorsky communicated with CAF pilots at the Defendants' Coatesville, PA facility.

101. In the CH-148 Flight Manual, Sikorsky represented to pilots that they "may use longitudinal cyclic stick to override IAS and prevent or assist it in pursuing the reference airspeed."

102. Sikorsky did not warn the CAF or RCAF pilots, through manuals or any other form of communication, that it was dangerous for pilots to manually override the Flight Director. It did not warn or advise that there were safety limitations on the duration, combination, or magnitude of inputs that pilots could make using the cyclic and pedals while the Flight Director was coupled to IAS.

103. During development testing, Sikorsky performed extremely limited tests of manual overrides of the Flight Director. These tests were reported to be limited to manual inputs of no more than 1 or 2 seconds. Sikorsky knew or should have known that these tests were completely inadequate to model real-world usage of the CH-148. Had Sikorsky conducted appropriate testing, they would have discovered the Command Model Attitude Bias that caused this fatal crash.

104. Even assuming *arguendo* Sikorsky believed that – despite its lack of warning – a pilot should always disengage the flight director before manually taking control, Sikorsky would have known that expectation was unrealistic. A pilot forgetting to turn off an automated flight control system before manually taking control is a classic human-

automation failure that is well known in the industry, especially because it has resulted in several deadly crashes. A responsible helicopter manufacturer would have evaluated this readily foreseeable event and would have incorporated design laws to prevent it from happening.

105. The Sikorsky Defendants breached industry standards by failing to warn pilots when their inputs approached the limits of the parameters that had been tested, and by failing to automatically disconnect the Flight Director when these limits were exceeded.

**iv. Cause of the Accident**

106. The accident occurred during an RTT maneuver that was commonly performed by RCAF pilots in the CH-124 Sea King and the CH-148. An RTT maneuver involves departure from straight-and-level flight with a climb and banked turn, then a yaw in the same direction as the turn near the apex, followed by a descent to the starting altitude. This results in a tight, skidding turn that puts the helicopter on a heading 180° from where it started. The maneuver is referred to as an RTT because it is an effective way to reverse the flight path and return to a target that the helicopter has flown past.

107. Prior to beginning the RTT, the Incident CH-148 Helicopter was flying coupled to IAS of 140 knots and to an altitude hold 50 feet above the ocean. The Sikorsky Defendants had not warned the pilots had to decouple IAS prior to, or during, the RTT. Before this accident, Sikorsky's instructions permitted pilots to manually override the Flight Director.

108. During the incident maneuver, the EFCS tracked the difference between the actual airspeed and attitude, and its desired airspeed and attitude. This difference grew



even larger because of how the EFCS processed pedal inputs. Sikorsky had not provided the pilots with any information that would have enabled them to understand that a significant difference was accumulating between the actual and desired airspeed and attitude.

109. Near the peak of the climbing turn, when the cyclic was passing through neutral in the pitch-axis, the EFCS did the unthinkable: it determined it needed to return the helicopter to an airspeed of 140 knots. The EFCS caused the helicopter to pitch nose down abruptly to build air speed. In doing so, it ignored or overpowered pilot inputs from the cyclic which was being held full aft. After the accident, Sikorsky labelled this deadly defect in its EFCS as a “Command Model Attitude Bias.”

110. Before their deaths, the flight crew only had seconds to determine why the helicopter was not responding to their commands. In this short time, it was impossible for them to diagnose and solve the problem Sikorsky created and overlooked for many years.

111. Everyone on board was killed because Sikorsky designed a highly dangerous EFCS that ignored or overpowered pilot commands. Had Sikorsky conducted adequate testing, it would have been aware of this deadly defect.

112. Aircraft maintenance, component part failure and weather did not play any role in causing the crash.

**v. Inadequate and Ineffective Pilot Information Displays and Warnings**

113. It is essential that pilot information displays be designed so that safety critical information is conveyed effectively to the pilots.

114. Sikorsky should have recognized that, during CH-148 missions, pilots oftentimes look out of the aircraft for extended times.

115. In violation of decades of recognized industry practice and previous admonishments by the FAA, Sikorsky designed the CH-148 cockpit so that critical safety information was located outside of the pilots' effective range of vision and was conveyed solely by a change in color.

116. Sikorsky did not provide any visual or aural cueing to the pilots that a Command Model Attitude Bias was developing or existing.

117. Sikorsky did not provide any visual or aural cueing to the pilots that manual inputs were exceeding those it had tested for when the Flight Director was engaged.

118. Sikorsky's design included "control limit cueing" warnings, which are intended to warn pilots when cyclic or pedal inputs are running out of authority. This system did not function properly during the accident sequence: the system gave no warning until immediately before impact even though there was no pitch authority remaining from the apex of the turn until impact. Had the system functioned properly, it would have warned the pilots at the apex of the turn, prompting them to decouple the Flight Director.

**vi. Additional Facts Related to Negligence Common to All Plaintiffs**

119. At all times relevant to the design, marketing, assembly, manufacture, sale, and use of their CH-148 helicopters, the Sikorsky Defendants were aware or should have been aware of the potential catastrophic consequences of an unsafe design, of inaccurate product information, and/or inaccurate or inadequate flight instructions for their CH-148 helicopter.

120. Despite their awareness of the consequences of their actions, the Sikorsky Defendants marketed a helicopter which they knew was unsafe; they deliberately misrepresented the capacity and operational characteristics of their CH-148s; they ignored field experience that documented the unsafe condition of their product; and they provided inaccurate and dangerous instructions to the owners and pilots of CH-148 helicopters.

121. The Sikorsky Defendants have prioritized their sales and profits over the safety of the passengers and pilots of their CH-148 helicopters.

122. Despite the fact that the Sikorsky Defendants had undertaken the duty to alert their customers of any defects or unsafe conditions in the product, the Defendants did not notify the helicopter owners or operators of the potentially fatal consequences of utilizing manual controls while the Flight Director was partially engaged; the Defendants knew that their failure to reasonably perform this undertaking increased the risk of harm; and the Defendants knew that the owners and operators of the helicopter would rely and did rely upon the Defendants' undertaking.

123. In addition to the conduct set forth above, the Sikorsky Defendants' negligence, gross negligence, and reckless disregard for safety consists, *inter alia*, of the following acts and omissions:

- a. Designing their CH-148 helicopter so that its flight control computers took control of the helicopter away from the pilots when they made significant pedal and cyclic inputs when coupled to the Flight Director;
- b. Designing their CH-148 helicopter without a rigorous design review process and testing regime that would have identified the Command Model Attitude Bias phenomenon;

- c. Designing their CH-148 helicopter such that it did not perform its intended functions under foreseeable operating conditions;
- d. Ignoring the long history of CAF pilots conducting RTT maneuvers in the CH-124 despite the absence of an RTT maneuver being listed in the flight manual;
- e. Failing to warn DND pilots of the potentially fatal consequences associated with Sikorsky's design of the CH-148 helicopter;
- f. Designing their CH-148 helicopter so it was not airworthy;
- g. Failing to exercise due care under the circumstances;
- h. Violating sound principles of design engineering and hazard/risk analysis in the design and manufacture of their CH-148 helicopter;
- i. Violating industry standards including, but not limited to, 14 C.F.R. 29.1309, SAE ARP4761, ADS-33E-PRF, and DO-178B;
- j. Designing the CH-148's cockpit pilot information displays so that the displays were inadequate, ineffective and violated industry practice and standards;
- k. Deciding to not provide an aural alert of a flight director override;
- l. Designing its Fly-By-Wire EFCS so that the automated controls would not disengage when safety parameters were exceeded;
- m. Implementing and enforcing corporate policies and procedures that allowed and encouraged the unsafe design of the CH-148 helicopter;
- n. Implementing and enforcing corporate policies and procedures that allowed and encouraged the delay in identifying the risk associated with Command Model Attitude Bias;
- o. Implementing and enforcing corporate policies and procedures that allowed and encouraged the delay in addressing the risk associated with Command Model Attitude Bias;
- p. Implementing and enforcing corporate policies and procedures that allowed and encouraged placing corporate financial interests over the safety of the passengers and pilots of their helicopters;

- q. Inadequately monitoring, investigating and interpreting the field experience of the CH-148 fleet;
- r. Ignoring available data that confirmed that CH-148s were being used to perform Return-To-Target maneuvers which should have prompted a reevaluation of the EFCS to see if it was safe for this application;
- s. Failing to alert its customer that the Sikorsky CH-148 was unsafe for performing multi-axis maneuvers., including RTTs;
- t. Providing inadequate and inaccurate flight instructions to pilots of CH-148 helicopters;
- u. Failing to fulfill their responsibilities to provide post-sale warnings and instructions to operators of CH-148 helicopters; and
- v. Failing to fulfill their responsibilities to retro-fit their CH-148 helicopters with replacement component parts, including flight instructions, that would mitigate the risk associated with Command Model Attitude Bias.

124. As a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and reckless disregard of safety, Plaintiffs' decedents suffered fatal injuries.

125. In light of their negligence, gross negligence and reckless disregard for safety, the Sikorsky Defendants are liable to each and every one of the Plaintiffs for the losses and damages suffered by the Plaintiffs as the result of the April 29, 2020 crash.

**vii. Additional Facts Related to Strict Liability/Product Liability Common to All Plaintiffs**

126. At the time of design, manufacturing, marketing, sale, and distribution of the Incident CH-148 Helicopter, the Sikorsky Defendants were engaged in the business of designing, manufacturing, selling, and supplying commercial products, specifically helicopters, and were "suppliers" and commercial "sellers" within the legal requirements

for imposing on these Defendants strict liability and product liability under the Restatement of Torts.

127. At the time of its sale and distribution, the Incident CH-148 Helicopter was a product within the requirements for strict liability and product liability under Section 402A of the Restatement (Second) of Torts.

128. At the time of the accident, the Incident CH-148 Helicopter was being used for its known, intended, and foreseeable use. Performing multi-axis maneuvers, including Return-To-Target Maneuvers, and inputting manual controls while the Flight Director is engaged are foreseeable uses of the CH-148 helicopter.

129. The Plaintiffs' decedents were all intended users of the product.

130. Prior to the April 29, 2020 crash, the Sikorsky Defendants' product – the Incident CH-148 Helicopter – did not undergo any substantial change from the condition in which it had been supplied and sold.

131. The Sikorsky Defendants' product was supplied and sold in a defective and unsafe condition, unreasonably dangerous to Plaintiffs' decedents, and to others similarly employed; said product was not capable of being made safe for its intended and ordinary use and purpose; Defendants failed to give adequate or sufficient warnings and/or instructions about the risks, dangers, harm and limitations inherent in the use of said product.

132. The Sikorsky Defendants supplied and sold this defective product without warnings, cautions and instructions concerning the potential hazards, limitations and

dangers of the product and the methods necessary to reduce or limit the risk of serious injury or death.

133. Before the April 29, 2020 crash, the Sikorsky Defendants did not cure the defects and unsafe conditions in their product.

134. Plaintiffs' decedents suffered fatal injuries as a direct and proximate result of the unsafe and defective condition of the Sikorsky Defendants' product.

135. The Sikorsky Defendants are strictly liable to the Plaintiffs for all losses and damages that Plaintiffs and Plaintiffs' decedents suffered as a result of the April 29, 2020 crash.

**viii. Facts Common to Each Plaintiff's Claims Under the Death on the High Seas Act**

136. DOHSA provides that, "[w]hen the death of an individual is caused by wrongful act, neglect, or default occurring on the high seas beyond three nautical miles from the shore of the United States, the personal representative of the decedent may bring a civil action in admiralty against the person or vessel responsible. The action shall be for the exclusive benefit of the decedent's spouse, parent, child, or dependent relative." 46 U.S.C. §30302.

137. The Incident Helicopter crashed into the Ionian Sea seventy-seven nautical miles west of Greece, thus satisfying the geographical requisite for application of DOHSA.

138. As detailed above, this accident was caused by the Sikorsky Defendants' negligence, gross negligence and reckless disregard of safety.

139. The accident was likewise caused by the Sikorsky Defendants' sale of a defective product within the meaning of Section 402A of the Restatement (Second) of Torts.

**COUNT I - WRONGFUL DEATH ACTION PURSUANT  
TO THE DEATH ON THE HIGH SEAS ACT, 46 U.S.C. 30301 et seq.  
Joanne Cousins on behalf of the DOHSA beneficiaries  
of Matthew Cousins v. all Defendants**

140. Plaintiff Joanne Cousins realleges and incorporates by reference every preceding paragraph as though set forth fully herein.

141. Plaintiff's decedent Matthew Cousins was survived by his wife, Plaintiff Joanne Cousins, and by their two minor children, T.C. and A.C.

142. Due to the Defendants' conduct, Plaintiff Joanne Cousins and the couple's minor children have lost the financial support and contributions Matthew Cousins would have made to them had he lived and have lost the inheritance they would have received if Matthew Cousins had not been killed by the Defendants' conduct, including the sale of an unsafe product.

143. Due to the Defendants' conduct, Plaintiff Joanne Cousins and the couple's minor children have lost the household services and contributions Matthew Cousins would have made to them had he lived.

144. Due to the Defendants' conduct, Plaintiff Joanne Cousins' two children have lost the nurture, instruction, guidance, and physical, intellectual, and moral training they would have received from their father Matthew Cousins had he lived.



145. Due to the Defendants' conduct, Plaintiff Joanne Cousins has lost the nurture, advice, and care she would have received from Matthew Cousins had he lived.

146. Due to the Defendants' conduct, Plaintiff Joanne Cousins, as the executrix of the estate, has incurred funeral, burial and estate administration expenses related to the death of her husband.

147. Plaintiff Joanne Cousins, as executrix of the Estate of Matthew Cousins, is authorized to seek wrongful death damages under DOHSA against the Sikorsky Defendants on behalf of Matthew Cousins' statutory beneficiaries.

**WHEREFORE**, Plaintiff Joanne Cousins, on behalf of the DOHSA beneficiaries of Matthew Cousins, demands damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT II - SURVIVAL ACTION PURSUANT TO 42 P.S. §8302**  
**Joanne Cousins, as executrix of the**  
**Estate of Matthew Cousins v. all Defendants**

148. Plaintiff Joanne Cousins realleges and incorporates by reference every paragraph in Count I as though set forth fully herein.

149. Plaintiff's decedent, Matthew Cousins, died as a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and the reckless and wanton disregard for safety.

150. Matthew Cousins' fatal injuries were a direct and proximate result of the defective and unsafe condition of Defendants' product as sold by the Defendants.

151. The Estate of Matthew Cousins has suffered economic damages as the result of the Sikorsky Defendants' conduct, including the sale of an unsafe product, which resulted in his death on April 29, 2020.

152. The Estate of Matthew Cousins is entitled to seek damages from the Defendants for Matthew Cousins' preimpact fright, his awareness of his impending peril, and what he endured prior to his death.

153. Through this Survival Action, the Estate of Matthew Cousins is entitled to recover for his pain and suffering, and for the financial losses to the Estate due to his death, including but not limited to the loss of his gross earnings, benefits, and lifetime financial gains.

154. The Estate of Matthew Cousins is entitled to seek punitive damages against the Defendants for their reckless and wanton disregard for safety and for their outrageous conduct.

**WHEREFORE**, Plaintiff Joanne Cousins, on behalf of the Estate of Matthew Cousins, demands compensatory and punitive damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT III - WRONGFUL DEATH ACTION PURSUANT  
TO THE DEATH ON THE HIGH SEAS ACT, 46 U.S.C. 30301 et seq.  
Tanya Cowbrough, on behalf of the DOHSA beneficiaries of  
Abbigail Cowbrough v. all Defendants**

155. Plaintiff Tanya Cowbrough realleges and incorporates by reference paragraphs 1 through 139 as though set forth fully herein.

156. Abbigail's brother August has a neuro-diverse condition. From a young age, August had been a central part of Abbigail's life. Shortly before the accident, Abbigail purchased a home in Nova Scotia which she planned to share with August upon her return from duty.

157. Due to the Defendants' conduct, including the sale of an unsafe product, Plaintiff Tanya Cowbrough and Abbigail's brother August Pittarelli have lost the financial support and contributions Abbigail Cowbrough would have made to them had she lived, and August Pittarelli has lost the inheritance he would have received if Abbigail Cowbrough had not been killed by the Defendants' conduct and product.

158. Due to the Defendants' conduct, Plaintiff Tanya Cowbrough and Abbigail's brother August Pittarelli have lost the household services and contributions Abbigail Cowbrough would have made to them had she lived.

159. Due to the Defendants' conduct, Abbigail's brother August Pittarelli has lost the nurture, instruction, guidance, and physical, intellectual, and moral training he would have received from Abbigail Cowbrough had she lived.

160. Due to the Defendants' conduct, Plaintiff Tanya Cowbrough, as the executrix of the estate, has incurred funeral, burial and estate administration expenses related to the death of her daughter.

161. Plaintiff Tanya Cowbrough, as executrix of the Estate of Abbigail Cowbrough, is authorized to seek wrongful death damages under DOHSA against the Sikorsky Defendants on behalf of Abbigail Cowbrough's statutory beneficiaries.

**WHEREFORE**, Plaintiff Tanya Cowbrough, on behalf of the DOHSA beneficiaries of Abbigail Cowbrough, demands damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT IV - SURVIVAL ACTION PURSUANT TO 42 P.S. §8302**  
**Tanya Cowbrough, as executrix of the**  
**Estate of Abbigail Cowbrough v. all Defendants**

162. Plaintiff Tanya Cowbrough realleges and incorporates by reference every paragraph of Count III as though set forth fully herein.

163. Plaintiff's decedent, Abbigail Cowbrough, died as a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and the reckless and wanton disregard for safety.

164. The fatal injuries sustained by Abbigail Cowbrough were likewise a direct and proximate result of the defective and unsafe condition of Defendants' product as sold by the Defendants.

165. The Estate of Abbigail Cowbrough has suffered economic damages as the result of the Sikorsky Defendants' conduct, including the sale of an unsafe product, which resulted in her death on April 29, 2020.

166. The Estate of Abbigail Cowbrough is entitled to seek damages from the Defendants for Abbigail's preimpact fright, her awareness of her impending peril, and what she endured prior to her death.

167. Through this Survival Action, the Estate of Abbigail Cowbrough is entitled to recover for her pain and suffering, and for the financial losses to the Estate due to her

death, including but not limited to the loss of her gross earnings, benefits, and lifetime financial gains.

168. The Estate of Abbigail Cowbrough is entitled to seek punitive damages against the Defendants for their reckless and wanton disregard for safety and for their outrageous conduct.

**WHEREFORE**, Plaintiff Tanya Cowbrough, on behalf of the Estate of Abbigail Cowbrough, demands compensatory and punitive damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT V - WRONGFUL DEATH ACTION PURSUANT  
TO THE DEATH ON THE HIGH SEAS ACT, 46 U.S.C. 30301 et seq.  
Kyle Hagen on behalf of the DOHSA beneficiaries of  
Kevin Hagen v. all Defendants**

169. Plaintiff Kyle Hagen realleges and incorporates by reference paragraphs 1 through 139 as though set forth fully herein.

170. Due to the Defendants' conduct, including the sale of an unsafe product, Kevin Hagen's surviving parents, Lynn Steiner and Steffen Hagen, lost the household services and financial contributions Kevin Hagen would have made to them had he lived.

171. Due to the Defendants' conduct, Plaintiff Kyle Hagen, as the executor of the estate, has incurred funeral, burial and estate administration expenses related to the death of his brother.

172. Plaintiff Kyle Hagen, as executor of the Estate of Kevin Hagen, is authorized to seek wrongful death damages under DOHSA against the Sikorsky Defendants on behalf of Kevin Hagen's statutory beneficiaries.

**WHEREFORE**, Plaintiff Kyle Hagen, on behalf of the DOHSA beneficiaries of Kevin Hagen, demands damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT VI - SURVIVAL ACTION PURSUANT TO 42 P.S. §8302**

**Kyle Hagen, as executor of the  
Estate of Kevin Hagen v. all Defendants**

173. Plaintiff Kyle Hagen realleges and incorporates by reference every paragraph of Count V as though set forth fully herein.

174. Plaintiff's decedent, Kevin Hagen, died as a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and the reckless and wanton disregard for safety.

175. The fatal injuries sustained by Kevin Hagen were likewise a direct and proximate result of the defective and unsafe condition of Defendants' product as sold by the Defendants.

176. The Estate of Kevin Hagen has suffered economic damages as the result of the Sikorsky Defendants' conduct, including the sale of an unsafe product, which resulted in his death on April 29, 2020.

177. The Estate of Kevin Hagen is entitled to seek damages from the Defendants for the preimpact fright, for his awareness of his impending peril, and for what he endured prior to his death.

178. Through this Survival Action, the Estate of Kevin Hagen is entitled to recover for his pain and suffering, and for the financial losses to the Estate due to his death, including but not limited to the loss of his gross earnings, benefits, and lifetime financial gains.

179. The Estate of Kevin Hagen is entitled to seek punitive damages against the Defendants for their reckless and wanton disregard for safety and for their outrageous conduct.

**WHEREFORE**, Plaintiff Kyle Hagen, on behalf of the Estate of Kevin Hagen, demands compensatory and punitive damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT VII - WRONGFUL DEATH ACTION PURSUANT  
TO THE DEATH ON THE HIGH SEAS ACT, 46 U.S.C. 30301 et seq.  
Amanda MacDonald on behalf of the DOHSA beneficiaries of  
Brenden Ian MacDonald v. all Defendants**

180. Plaintiff Amanda MacDonald realleges and incorporates by reference paragraph 1 through 139 as though set forth fully herein.

181. Plaintiff's decedent Brenden Ian MacDonald is survived by his wife, plaintiff Amanda MacDonald, and by their three minor children, B.M., C.M., and T.M.

182. Plaintiff Amanda MacDonald and the couple's children have lost the financial support, contributions and inheritance Brenden Ian MacDonald would have provided to them had he not been killed by the Defendants' conduct, including the sale of an unsafe product.

183. Due to the Defendants' conduct, Plaintiff Amanda MacDonald and the couple's children have lost the household services and contributions Brenden Ian MacDonald would have made to them had he lived.

184. Due to the Defendants' conduct, Brenden Ian MacDonald's surviving parents, Peter and Lynn MacDonald, lost the household services and financial contributions Brenden Ian MacDonald would have made to them had he lived.

185. Due to the Defendants' conduct, each of the Plaintiff's three children have lost the nurture, instruction, guidance, and physical, intellectual, and moral training they would have received from their father Brenden Ian MacDonald had he lived.

186. Due to the Defendants' conduct, Plaintiff Amanda MacDonald has lost the nurture, advice, and care she would have received from Brenden Ian MacDonald had he lived.

187. Due to the Defendants' conduct, Plaintiff Amanda MacDonald, as the executrix of the estate, has incurred funeral, burial and estate administration expenses related to the death of her husband.

188. Plaintiff Amanda MacDonald, as executrix of the Estate of Brenden Ian MacDonald, is authorized to seek wrongful death damages under DOHSA against the Sikorsky Defendants on behalf of Brenden Ian MacDonald's statutory beneficiaries.



**WHEREFORE**, Plaintiff Amanda MacDonald, on behalf of the DOHSA beneficiaries of Brenden Ian MacDonald, demands damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT VIII - SURVIVAL ACTION PURSUANT TO 42 P.S. §8302**  
**Amanda MacDonald, as executrix of the**  
**Estate of Brenden Ian MacDonald v. all Defendants**

189. Plaintiff Amanda MacDonald realleges and incorporates by reference every paragraph of Count VII as though set forth fully herein.

190. Plaintiff's decedent, Brenden Ian MacDonald, died as a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and the reckless and wanton disregard for safety.

191. The fatal injuries sustained by Brenden Ian MacDonald were likewise a direct and proximate result of the defective and unsafe condition of Defendants' product as sold by the Defendants.

192. The Estate of Brenden Ian MacDonald has suffered economic damages as the result of the Sikorsky Defendants' conduct, including the sale of an unsafe product, which resulted in his death on April 29, 2020.

193. The Estate of Brenden Ian MacDonald is entitled to seek damages from the Defendants for the preimpact fright, for his awareness of his impending peril, and for what he endured prior to his death.

194. Through this Survival Action, the Estate of Brenden Ian MacDonald is entitled to recover for his pain and suffering, and for the financial losses to the Estate due

to his death, including but not limited to the loss of his gross earnings, benefits, and lifetime financial gains.

195. The Estate of Brenden Ian MacDonald is entitled to seek punitive damages against the Defendants for their reckless and wanton disregard for safety and for their outrageous conduct.

**WHEREFORE**, Plaintiff Amanda MacDonald, on behalf of the Estate of Brenden Ian MacDonald, demands compensatory and punitive damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT IX - WRONGFUL DEATH ACTION PURSUANT  
TO THE DEATH ON THE HIGH SEAS ACT, 46 U.S.C. 30301 et seq.  
Kathryn Bowen on behalf of the DOHSA beneficiaries of  
Maxime Miron-Morin v. all Defendants**

196. Plaintiff Kathryn Bowen realleges and incorporates by reference paragraphs 1 through 139 as though set forth fully herein.

197. Plaintiff's decedent Maxime Miron-Morin was survived by his wife, plaintiff Kathryn Bowen.

198. Plaintiff Kathryn Bowen has lost the financial support, contributions and inheritance that Maxime Miron-Morin would have provided to her had he lived and not been killed by Defendants' conduct, including the sale of an unsafe product.

199. Due to the Defendants' conduct and defective product, Plaintiff Kathryn Bowen has lost the household services and contributions Maxime Miron-Morin would have made to them had he lived.

200. Due to the Defendants' conduct and defective product, Maxime Miron-Morin's surviving parents, Marie-Claude Miron and Jean Morin, lost the household services and financial contributions Maxime Miron-Morin would have made to them had he lived.

201. Due to the Defendants' conduct and defective product, Plaintiff Kathryn Bowen has lost the nurture, advice, and care she would have received from Maxime Miron-Morin had he lived.

202. Due to the Defendants' conduct and defective product, Plaintiff Kathryn Bowen, as the administratrix of the estate, has incurred funeral, burial and estate administration expenses related to the death of her husband.

203. Plaintiff Kathryn Bowen, as administratrix of the Estate of Maxime Miron-Morin, is authorized to seek wrongful death damages under DOHSA against the Sikorsky Defendants.

**WHEREFORE**, Plaintiff Kathryn Bowen demands damages under DOHSA against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT X - SURVIVAL ACTION PURSUANT TO 42 P.S. §8302**  
**Kathryn Bowen, as administratrix of the**  
**Estate of Maxime Miron-Morin v. all Defendants**

204. Plaintiff Kathryn Bowen realleges and incorporates by reference every paragraph of Count IX as though set forth fully herein.

205. Plaintiff's decedent, Maxime Miron-Morin, died as a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and the reckless and wanton disregard for safety.

206. The fatal injuries sustained by Maxime Miron-Morin were likewise a direct and proximate result of the defective and unsafe condition of Defendants' product as sold by the Defendants.

207. The Estate of Maxime Miron-Morin has suffered economic damages as the result of the Sikorsky Defendants' conduct, including the sale of an unsafe product, which resulted in his death on April 29, 2020.

208. The Estate of Maxime Miron-Morin is entitled to seek damages from the Defendants for the preimpact fright, for his awareness of his impending peril, and for what he endured prior to his death.

209. Through this Survival Action, the Estate of Maxime Miron-Morin is entitled to recover for his pain and suffering, and for the financial losses to the Estate due to his death, including but not limited to the loss of his gross earnings, benefits, and lifetime financial gains.

210. The Estate of Maxime Miron-Morin is entitled to seek punitive damages against the Defendants for their reckless and wanton disregard for safety and for their outrageous conduct.

**WHEREFORE**, Plaintiff Kathryn Bowen, on behalf of the Estate of Maxime Miron-Morin, demands compensatory and punitive damages against each of the

Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT XI - WRONGFUL DEATH ACTION PURSUANT  
TO THE DEATH ON THE HIGH SEAS ACT, 46 U.S.C. 30301 et seq.  
Michael Custance on behalf of the DOHSA beneficiaries of  
Matthew Pyke v. all Defendants**

211. Plaintiff Michael Custance realleges and incorporates by reference paragraphs 1 through 139 as though set forth fully herein.

212. Plaintiff's decedent Matthew Pyke was survived by his parents David Pyke and Kelly Custance, and by his brother Michael Custance.

213. Due to the Defendants' conduct, including the sale of an unsafe product, Matthew Pyke's surviving parents, David Pyke and Kelly Custance, lost the household services and financial contributions Matthew Pyke would have made to them had he lived. At the time of Matthew's death, his father David Pyke resided in a home owned by his son.

214. Due to the Defendants' conduct, Plaintiff Michael Custance, as the executor of the estate, has incurred funeral, burial and estate administration expenses related to the death of his brother.

215. Plaintiff Michael Custance, as executor of the Estate of Matthew Pyke, is authorized to seek wrongful death damages under DOHSA against the Sikorsky Defendants on behalf of Matthew Pyke's statutory beneficiaries.

**WHEREFORE**, Plaintiff Michael Custance, on behalf of the DOHSA beneficiaries of Matthew Pyke, demands damages against each of the Defendants, jointly and severally,

in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**COUNT XII - SURVIVAL ACTION PURSUANT TO 42 P.S. §8302**

**Michael Custance, as executor of the  
Estate of Matthew Pyke v. all Defendants**

216. Plaintiff Michael Custance realleges and incorporates by reference every paragraph of Count XI as though set forth fully herein.

217. Plaintiff's decedent, Matthew Pyke, died as a direct and proximate result of the Sikorsky Defendants' negligence, gross negligence, and the reckless and wanton disregard for safety.

218. The fatal injuries sustained by Matthew Pyke were likewise a direct and proximate result of the defective and unsafe condition of Defendants' product as sold by the Defendants.

219. The Estate of Matthew Pyke has suffered economic damages as the result of the Sikorsky Defendants' conduct, including the sale of an unsafe product, which resulted in his death on April 29, 2020.

220. The Estate of Matthew Pyke is entitled to seek damages from the Defendants for the preimpact fright, for his awareness of his impending peril, and for what he endured prior to his death.

221. Through this Survival Action, the Estate of Matthew Pyke is entitled to recover for his pain and suffering, and for the financial losses to the Estate due to his death, including but not limited to the loss of his gross earnings, benefits, and lifetime financial gains.

222. The Estate of Matthew Pyke is entitled to seek punitive damages against the Defendants for their reckless and wanton disregard for safety and for their outrageous conduct.

**WHEREFORE**, Plaintiff Michael Custance, on behalf of the Estate of Matthew Pyke, demands compensatory and punitive damages against each of the Defendants, jointly and severally, in an amount greater than \$75,000.00, together with delay damages, interest, costs of suit and such other relief that the Court deems just.

**JURY DEMAND**

Plaintiffs demand a trial by jury on all the legal claims asserted in their Complaint.

RAYNES & LAWN

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Date: July 10, 2023